

REMARKS/ARGUMENTS

In response to the Office Action dated July 30, 2003, claims 1, 5 and 8 are amended, and claim 7 is cancelled. Claims 1, 4-6, 8, 11 and 14 are now active in this application. No new matter has been added.

REJECTION OF CLAIMS UNDER 35 U.S.C. § 102 AND § 103

I. Claims 1, 6 and 14 are rejected under 35 U.S.C. § 102(b) as being anticipated by Nishi (USPN 5,868,864), which is an English equivalent of JP 9-208995, published 08/1997.

Claims 7 and 8 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Nishi in view of Sherman "Emulsion Science" (Handbook), Academic Press, 1968, page 150.

Claim 11 is rejected under 35 U.S.C. § 103(a) as being unpatentable over Nishi in view of Morita (JP 05266412).

Claims 4 and 5 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Nishi in view of Osano et al. (USPN 5,334,258).

II. To expedite prosecution, independent claim 1 is amended to recite:

A washing method comprising:
a nonaqueous washing process of washing an object to be washed using a nonaqueous solution;
an intermediate washing process of washing the object to be washed using alcohol ~~a~~-after said nonaqueous washing process; and
an aqueous washing process of washing the object to be washed with the aqueous solution after said intermediate washing process.

In addition, claim 5 (depending from claim 4) is amended to recite that “the drying process is performed by using a vapor of alcohol”, claim 7 is cancelled, and claim 8 is amended to depend from amended independent claim 1 and recite that “said alcohol used in the intermediate washing process is isopropyl alcohol.”

The invention recited in amended independent claim 1 is characterized in that a washing process has an intermediate washing process using alcohol between a nonaqueous washing process and an aqueous washing process. The intermediate washing process using alcohol improves the work efficiency of the washing process and reduces a running cost because it prevents the interfusion of the nonaqueous solution with the aqueous solution.

The Examiner contends that it is obvious for a person skilled in the art to replace the detergent of Nishi with alcohol based on Sherman “Emulsion Science” (see rejection of claim 7). However, Applicant cannot agree to the Examiner’s assertion for the following reasons.

1. *The washing process using the detergent/emulsifier is an aqueous washing process* (see the 2nd and 3rd paragraphs of “Description of the Related Art” and “First Embodiment” of “Description of the Preferred Embodiments” in the present application).

2. The detergent/emulsifier *disperses* the nonaqueous solution (hydrocarbon solution) *to water* by surrounding the nonaqueous solution. Meanwhile, alcohol *dissolves* the nonaqueous solution *into itself*. Amended independent claim 1 uses the characteristic quality of alcohol that is different from that of the detergent/emulsifier.

3. Nishi does not disclose the intermediate washing process using alcohol. In addition, Sherman “Emulsion Science” merely discloses HLB values. The washing process recited in amended independent claim 1 eliminates problems arising when an object to be

washed is washed in an aqueous solution after greasy stains have been removed using a nonaqueous solution. However, a new material used in the washing process is not invented. More specifically, a feature of the invention recited in amended independent claim 1 is the introduction of the intermediate washing process using alcohol to the old washing process. Such feature is novel even if the character of alcohol is already known. More specifically, adoption of an intermediate washing process using alcohol between an initial nonaqueous washing process using a nonaqueous solution and a subsequent aqueous washing process using an aqueous solution is not obvious from Nishi and Sherman "Emulsion Science".

4. By introducing the intermediate washing process using alcohol, the washing method suppressed rapid degradation of the aqueous solution used in the aqueous washing process, provided long term stability in the washing of the object to be washed using the aqueous solution, reduced replacement of the aqueous solution, and improved the efficiency of the work of washing the object to be washed, as well as reduced the cost of running the washing process. The example of significant effect of the present invention is described in the "Fourth Embodiment" of "Description of the Preferred Embodiments" of the present application. Such effect is not obvious a person of ordinary skill in the art even when Nishi and Sherman "Emulsion Science" are considered alone or in combination. In support of the nonobviousness of such effect, a Declaration Under 37 CFR 1.132 is submitted herewith, which compares the washing method of amended independent claim 1 with the method of Nishi.

In view of the above, amended independent claim 1 is patentable over Nishi and Sherman "Emulsion Science", as are dependent claims 4, 5, 6, 8, 11 and 14.

III. In view of the above, the allowance of claims 1, 4-6, 8, 11 and 14, as amended, is respectfully solicited.

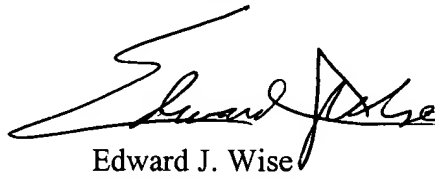
CONCLUSION

Accordingly, it is urged that the application, as now amended, overcomes the rejection of record and is in condition for allowance. Entry of the amendment and favorable reconsideration of this application, as amended, are respectfully requested. If there are any outstanding issues that might be resolved by an interview or an Examiner's amendment, Examiner is requested to call Applicants' attorney at the telephone number shown below.

To the extent necessary, a petition for an extension of time under 37 C.F.R. 1.136 is hereby made. Please charge any shortage in fees due in connection with the filing of this paper, including extension of time fees, to Deposit Account 500417 and please credit any excess fees to such deposit account.

Respectfully submitted,

McDERMOTT WILL & EMERY

A handwritten signature in black ink, appearing to read "Edward J. Wise", is written over a horizontal line.

Edward J. Wise
Registration No. 34,523

600 13th Street, NW
Washington, DC 20005-3096
(202) 756-8000 EJW/dmd
DATE: April 20, 2004
Facsimile: (202) 756-8087